Roof Top Water Tanks

Floor Under Water Tanks

**Causes of mosquito breeding**
- Water stagnation on uneven floor due to:
  a) rainwater accumulation
  b) overflows
  c) leakages from pipes

**Preventive/remedial measures**
- Shield tanks from rainwater
- Channel overflows away
- Fix leaking pipes
- Apply BTI briquettes periodically

Check For Gaps And Openings At Covers And Ventilation Holes

**Causes of mosquito breeding**
- Inspection covers not properly closed after maintenance work
- Damaged, corroded or missing covers and cover gaskets
- Ventilation holes not covered or screened

**Preventive/remedial measures**
- Close inspection covers properly after maintenance
- Repair or replace covers and cover gaskets
- Install rubber gasket for tank covers to eliminate gaps
- Cover all ventilation holes with anti-mosquito screen
Check For Torn Or Detached Mosquito Nettings

**Causes of mosquito breeding**
- Anti-mosquito netting for overflow outlets is absent, damaged or not properly installed

**Preventive/remedial measures**
- Cover all overflow outlets with anti-mosquito netting and replace all damaged nettings

---

Reinforced Concrete Flat Roof Including Scupper Drains

**Causes of mosquito breeding**
- Water stagnation due to
  a) uneven floor
  b) clogged drains
  c) poor gradient of drains

**Preventive/remedial measures**
- Re-grade uneven floor
- Carry out regular cleaning to prevent blockages
- Re-grade uneven drains
Roof Gutters

Causes of mosquito breeding
- Water stagnation due to
  a) warping of roof gutters, impeding water flow
  b) poor gradient of gutters
  c) roof gutters clogged with leaves or silt
  d) misalignment of rainwater downpipes with elbow joint resulting in blockages

Preventive/remedial measures
- Remove roof gutters where possible
- Re-grade uneven gutters
- Carry out regular cleaning to prevent blockages
- Apply BTI briquettes periodically

Discarded Items & Receptacles

Causes of mosquito breeding
- Water stagnation in discarded receptacles

Preventive/remedial measures
- Carry out regular cleaning and disposal of unwanted articles
Corridor & Staircase

Corridors And Staircase Landings, Including Scupper Drains

Causes of mosquito breeding
- Water stagnation due to
  a) uneven floor
  b) clogged drains
  c) poor gradient of drains

Preventive/remedial measures
- Re-grade uneven floor
- Carry out regular cleaning to prevent blockages
- Re-grade uneven drains

Gully/ Floor Traps

Causes of mosquito breeding
- Water stagnation in gully/floor traps

Preventive/remedial measures
- Install anti-mosquito valve into traps
- Clear blockages in traps
- Seal up traps that are no longer in use
Flower Pots/Plates/Watering Cans/Plastic Containers/Domestic Containers

**Causes of mosquito breeding**
- Water stagnation in flowerpot plates and on hardened soil
- Collection of water in domestic containers and receptacles

**Preventive/remedial measures**
- Remove flowerpot plates where possible
- Loosen hardened soil regularly
- Empty all water in domestic containers and receptacles
- Store domestic containers and receptacles under shelter, away from rain

---

Canopies

**Causes of mosquito breeding**
- Water stagnation due to:
  
  a) clogged drainage pipes
  b) uneven flooring of canopies

**Preventive/remedial measures**
- Maintain drainage pipes regularly to prevent blockages
- Re-grade floor of concrete canopies
- Apply BTI briquettes periodically

---

Discarded Items & Receptacles

For details, refer to page 38: Rooftop – Discarded Items & Receptacles
Ground Level - Void Deck

Pump Rooms/ Switch Rooms

Concrete Floor

Causes of mosquito breeding
- Water stagnation on uneven floor due to overflows or leakages from pipes

Preventive/remedial measures
- Channel overflows away
- Fix leaking pipes
- Apply BTI briquettes periodically

Gully/ Floor Traps

For details, refer to page 39: Corridor & Staircase – Gully/ Floor Traps

Discarded Items & Receptacles

For details, refer to page 38: RoofTop – Discarded Items & Receptacles
Water Tanks

For details, refer to page 36:
RoofTop — Water Tanks

Gully/Floor Traps

For details, refer to page 39:
Corridor & Staircase — Gully/Floor Traps

Scupper Drains

Causes of mosquito breeding

- Water stagnation due to
  a) clogged drains
  b) poor gradient of drains

Preventive/remedial measures

- Carry out regular cleaning to prevent blockages
- Re-grade uneven drains
Lift Shafts Including Lift Pits

Causes of mosquito breeding
- Water stagnation in the lift pits due to
  a) water seepage through cracks in walls and from the ground
  b) water from floor washing

Preventive/remedial measures
- Repair walls of lift shafts to prevent water seepage
- Ensure that water does not flow into the lift shafts during washing of lift lobby
- Pump up or soak up the water

Discarded Items & Receptacles

For details, refer to page 38:
RoofTop – Discarded Items & Receptacles
Ground Level - Apron of Building

Gutters Including Linkway Gutters

For details, refer to page 38: RoofTop – Roof Gutters

Subterranean Pits & Chambers Including Key Holes Or Gaps In Covers

Inspection Chambers And Sump Pits

Causes of mosquito breeding
- Collection of rainwater in chambers due to seepage through keyholes or gaps around covers
- Water stagnation in keyholes of covers

Preventive/remedial measures
- Close covers properly after maintenance
- Seal up keyholes and gaps around covers
Stop-Cock Pits

Causes of mosquito breeding
- Refer to page 44: Inspection Chambers and Sump Pits

Preventive/remedial measures
- Seal up keyholes and gaps around covers

Lightning Conductor Pits

Causes of mosquito breeding
- Collection of rainwater in chambers due to seepage through keyhole or gaps around cover

Preventive/remedial measures
- Fill up pits with sand and seal keyholes

Gully/Floor Traps

For details, refer to page 39: Corridor & Staircase – Gully/Floor Traps
**Valve Chambers/ Water Meter Concrete Compartments**

- **Causes of mosquito breeding**
  - Collection of rainwater in chambers due to blockages

- **Preventive/remedial measures**
  - Carry out regular cleaning to prevent blockages

**Main Riser Outlet Panels**

- **Causes of mosquito breeding**
  - Collection of water at base of panels
  - Drainage holes at base of panels are clogged

- **Preventive/remedial measures**
  - Provide drainage holes at base of panels
  - Carry out regular cleaning to clear blockages

**Planter Boxes**

- **Causes of mosquito breeding**
  - Water stagnation on hardened soil

- **Preventive/remedial measures**
  - Loosen hardened soil regularly
Open And Closed Perimeter Drains

**Causes of mosquito breeding**
- Water stagnation in drains due to
  a) blockages
  b) poor gradient
- Cleaning cannot be carried out properly in covered drains due to concrete slabs/metal gratings

**Preventive/remedial measures**
- Carry out regular cleaning to prevent blockages
- Re-grade uneven drains
- Remove concrete slabs/metal gratings permanently to facilitate cleaning

Outdoor Hanging And Standing Bins

**Causes of mosquito breeding**
- Collection of water at base of bins
- Drainage holes at base of bins are clogged

**Preventive/remedial measures**
- Provide drainage holes at base of bins
- Carry out regular cleaning to clear blockages
Hollow Metal Or PVC Columns

Causes of mosquito breeding:
- Collection of rainwater in hollows of cut-off metal bollard or PVC bar

Preventive/remedial measures:
- Seal up holes with cement or sand

Discarded Items & Receptacles

For details, refer to page 38:
Roof Top – Discarded Items & Receptacles
Ground Level - Playground/Leisure Facility & Landscaped Area/Garden/Club House/Guard House

Base Of BBQ Pits

Causes of mosquito breeding
- Collection of rainwater at base of pits

Preventive/remedial measures
- Re-grade base of pits
- Provide outlets at base of pits to drain water away

Flat Roof Top And Gutters Of Club/Guard Houses

Causes of mosquito breeding
- Water stagnation due to
  a) uneven surface of concrete rooftop
  b) warping of roof gutters, impeding water flow
  c) poor gradient of gutters
  d) roof gutters clogged with leaves or silt
  e) misalignment of rainwater downpipes with elbow joint, resulting in blockages

Preventive/remedial measures
- Remove roof gutters where possible
- Re-grade uneven gutters and concrete rooftop
- Carry out regular cleaning to prevent blockages
- Apply BTI briquettes periodically
Ponds And Water Fountains

Causes of mosquito breeding
- Water stagnation at corners of ponds or fountains that are not circulating
- Collection of water in depressions of fountain features

Preventive/remedial measures
- Introduce fish that are natural predators of mosquito larvae into the ponds
- Eliminate depressions of fountain features to allow water to flow

Lamp posts

Causes of mosquito breeding
- Collection of rainwater in lamp post trunks due to seepage through gaps in covers

Preventive/remedial measures
- Seal gaps around cover
Tree Holes, Bifurcation Between Branches, And Thick Leaf Axils  
(Banana Trees, Traveller's Palm And Any Similar Plants That Can Collect Rainwater)

Causes of mosquito breeding
- Collection of rainwater in tree holes, depressions between branches and thick leaf axils

Preventive/remedial measures
- Seal up all tree holes and depressions permanently with ferns or sand
- Avoid planting of vegetation with thick leaf axils

Ground Puddles/Depressions

Causes of mosquito breeding
- Collection of rain water in ground puddles or depressions

Preventive/remedial measures
- Back-fill puddles or depressions permanently

Discarded Items, Receptacles Strewn In Bushes And Flower Beds, Fallen Tree Fronds And Leaves

For details, refer to page 38: 
RoofTop – Discarded Items & Receptacles
Multi Storey Carpark/Basement Carpark
Concrete Floor Including Scupper Drains

Causes of mosquito breeding
- Water stagnation due to
  a) uneven floor
  b) clogged drains
  c) poor gradient of drains

Preventive/remedial measures
- Re-grade uneven floor
- Carry out regular cleaning to prevent blockages
- Re-grade uneven drains

Gully/Floor Traps
For details, refer to page 39:
Corridor & Staircase – Gully/Floor Traps

Pump Rooms/Switch Rooms
For details, refer to page 41:
Ground Level/Void Deck – Pump Rooms/Switch Rooms
Fire-Hose Reel Compartments

**Causes of mosquito breeding**
- Water stagnation at base of the fire-hose reel compartments due to leaks

**Preventive/remedial measures**
- Lock fire-hose reel compartments properly to prevent unauthorised usage
- Fix leakages

Valve Chambers / Water Meter Concrete Compartments

For details, refer to page 46:
Ground Level - Apron of Building – Valve Chambers / Water Meter Concrete Compartments

Ventilation Ducts

**Causes of mosquito breeding**
- Water stagnation on top of ventilation ducts due to rainwater accumulation

**Preventive/remedial measures**
- Shield ducts from rain
- Apply BTI briquettes periodically
Carpark Canopies

For details, refer to page 40:
Corridor & Staircase - Canopies

Discarded Items & Receptacles

For details, refer to page 38:
RoofTop – Discarded Items & Receptacles
Ground Carpark

Open And Closed Carpark Drains

For details, refer to page 47:
Ground Level - Apron Of Building – Open And Closed Perimeter Drains

Carpark Aeration Slabs

Causes of mosquito breeding
- Collection of water in hollows of aeration slabs

Preventive/remedial measures
- Refill hollows with soil and carry out replanting of grass to prevent soil erosion
Covers For Motorcycles

- **Causes of mosquito breeding**
  - Collection of rainwater on undulating surfaces of canvas covers

- **Preventive/remedial measures**
  - Avoid using canvas to cover motorcycles that are left unattended for long periods

Discarded Items & Receptacles

For details, refer to page 38:
RoofTop – Discarded Items & Receptacles

Bin Centre/ Bin Room
Rooftop Including Gutters

- **Causes of mosquito breeding**
  - Water stagnation due to
    a) uneven surface of concrete rooftop
    b) warping of roof gutters, impeding water flow
    c) poor gradient of gutters
    d) roof gutters clogged with leaves or silt
    e) misalignment of rainwater downpipes with elbow joint, resulting in blockages

- **Preventive/remedial measures**
  - Remove roof gutters where possible
  - Re-grade uneven gutters and concrete rooftop
  - Carry out regular cleaning to prevent blockages
  - Apply BTI briquettes periodically
Concrete Floor Including Scupper Drains

For details, refer to page 52:
Multi Storey Carpark/ Basement Carpark – Concrete Floor Including Scupper Drains

Gully/ Floor Traps

For details, refer to page 39:
Corridor & Staircase – Gully/ Floor Traps

Gully Baskets Below Compactor

- Causes of mosquito breeding
  - Water stagnation due to blockages

- Preventive/remedial measures
  - Carry out regular cleaning to prevent blockages

Stored Bulk Bins

- Causes of mosquito breeding
  - Water stagnation in stored bulk bins due to accumulation of rain

- Preventive/remedial measures
  - Shield bins from rain
Bulky Waste Storage Areas

**Causes of mosquito breeding**
- Collection of rainwater in bulky waste items and on the ground below

**Preventive/remedial measures**
- Dispose of unwanted articles regularly
- Store unwanted articles under shelter

Discarded Items & Other Water Bearing Receptacles

For details, refer to page 38: RoofTop – Discarded Items & Receptacles

Swimming Pool/ Jacuzzi

Swimming Pool Pump Rooms

**Causes of mosquito breeding**
- Water stagnation on uneven floor due to a) overflows 
b) leakages from pipes

**Preventive/remedial measures**
- Channel overflows away
- Fix leaking pipes
- Apply BTI briquettes periodically

Discarded Items & Receptacles

For details, refer to page 38: RoofTop – Discarded Items & Receptacles